

Commonwealth of Virginia



Information Technology Resource Management Standard

Addendum to the Networking, Telecommunications, and Cabling Standard

Department of Technology Planning

Addendum 1

Purpose of Addendum

This addendum provides replacement language for two requirements in the Networking, Telecommunications and Cabling Standard (COV ITRM Standard NET2001-01.1) authorizing the use of Category 6 cabling, and removing the requirement for a waiver to continue use of the T568B pin-pair assignment to maintain cabling plant consistency. The contents of this addendum will be incorporated in the next revision of the standard.

Category 6 Cable

Agencies may use the new Category 6 cabling standards, approved by EIA/TIA on June 1, 2002. The applicable requirement in Standard NET2001-01.1 is as follows:

Old Requirement 2. Agencies are to provide a minimum of certified Category 5e cable when installing new or replacement telecommunications cabling. In a typical office, two or more outlets would be provided with the first outlet having a Category 5e connection and the second, Category 5e or fiber.

This requirement is revised as follows:

Requirement 2. Agencies are to provide a minimum of certified Category 5e cable when installing new or replacement telecommunications cabling. In a typical office, two or more outlets would be provided with the first outlet having a Category 5e or Category 6 connection and the second, Category 5e, Category 6 or fiber.

Also, the following paragraph in NET 2001-01.1 that discusses Category 6 relative to Requirement 2 for cabling is rescinded.

Categories 6 and higher cabling practices are not recognized by the Commonwealth at this time. These cabling options will receive additional consideration by the Commonwealth when TIA/EIA standards have been adopted and when cost effective vendor solutions have been provided. Agencies that have installed a version of category 6 cabling prior to the promulgation of NET 2001-01.1 standard are to notify DTP of the scope of their installation and the vendors used if the installation is not fully backwards compatible with category 5e cabling and fully compliant with category 5e performance tests.

The Table 1 below provides information regarding the Category 6 modifications to the TIA/EIA standards.

Table 1: Standards addressing Category 6 Cabling

1. TIA-568-B.1-4 - Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 4 - Recognition of Category 6 and 850 nm Laser-Optimized 50/125 μ m Multimode Optical Fiber Cabling (ANSI/TIA-568-B.1-4-2003)
2. TIA/EIA-568-B.2-1 - Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Components - Addendum 1 - Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling (ANSI/TIA/EIA-568-B.2-1-2002)
3. TIA/EIA-854 - A Full Duplex Ethernet Specification for 1000 Mb/s (1000BASE-TX) Operating Over Category 6 Balanced Twisted-Pair Cabling (ANSI/TIA/EIA-854-2001)

Additional information on Category 6 standards may be found by searching for “category 6” at <http://www.tiaonline.org>.

Agencies with category 5e Local Area Network (LAN) cabling that do not anticipate higher than 100 Mbps service requirements over a period of two years may find a Category 5e extension to their present cabling plant an acceptable interim solution. Agencies that plan to upgrade their cabling plant to Category 6 should consider upgrading their entire plant at one time.

T568B Waivers

Agencies no longer require a waiver to continue use of the T568B pin-pair assignment to maintain cabling plant consistency. The applicable requirement in Standard NET2001-01.1 is as follows:

Old Requirement 3. Virginia agencies are required to implement the eight-position jack pin/pair assignment designated as T568A.

Prior to this addendum, agencies that used the T568B pin/pair assignment were required to request a waiver for continuing to implement T568B. Because maintaining a consistent plant is the right course of action for these agencies, submitting a waiver is no longer required.

This requirement is revised as follows:

Requirement 3. Agencies are required to use consistent eight-position jack pin/pair assignments throughout their cabling plant. The eight-position jack pin/pair assignment standard designated as T568A is the required standard to be used by Virginia agencies. Agencies that have consistently used T568A must continue to do so. The following exceptions address situations that existed prior to the 1991 requirement for using T568A.

- Any Virginia agency that has consistently used the T568B eight-position jack pin/pair assignment must continue this practice unless the agency is replacing its entire cabling plant.
- When an agency is replacing all cabling, the agency is required to implement T568A.
- When an agency has a mixed plant, which implements both T568A and T568B, the agency is required to carefully document the mixture and have clear rules for adding

or partially replacing cabling in a building. In addition, the agency with a mixed plant must have a plan for switching to T568A as building cabling is replaced.

The sentence in NET 2001-01.1 that discusses the prior waiver requirements for pin-pair assignments (see below) and the referenced Appendix are rescinded.

If using the T568B standard, agencies should apply for a waiver. (See Appendix A.)